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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/668,820	09/22/2003	Jason M. Ortega	IL-11091	1947
7590	03/04/2005		EXAMINER	
James S. Tak Assistant Laboratory Counsel Lawrence Livermore National Laboratory P.O. Box 808, L-703 Livermore, CA 94551			PEDDER, DENNIS H	
			ART UNIT	PAPER NUMBER
			3612	
DATE MAILED: 03/04/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.



Office Action Summary	Application No.	Applicant(s)
	10/668,820	ORTEGA ET AL.
Examiner	Art Unit	
	Dennis H. Pedder	3612

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 02 February 2005.

2a) This action is **FINAL**. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-12 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) Claim(s) _____ is/are allowed.

6) Claim(s) 1-12 is/are rejected.

7) Claim(s) _____ is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) Notice of References Cited (PTO-892)
2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) Notice of Informal Patent Application (PTO-152)
6) Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-3, 5-7, 9-10 are rejected under 35 U.S.C. 102(b) as being anticipated by Bilanin.

Bilanin has plates 28, 30 inwardly offset with a peak width between the top and bottom as the top is tapered and the rest of the plate edges are straight, hence of peak width along this straight edge. Applicant's remarks are noted, however, there is no limitation in the claims as to the meaning of "peak plate width" and the normal definition of "highest point", Random House College Dictionary, 1980 is applied. It is also interesting that applicant argues the effect of such "peak" dimension, yet continues to assert the right to claim much broader coverage, now twice denied.

As to claim 2, the horizontal plate 118 and vertical plate 112, 114 of Bilanin are adjacent each other at top of vertical and do not extend beyond each other. Bilanin teaches a similar effect on drag for both curved and straight vertical plates and a peak plate width throughout the length thereof of this second embodiment, hence between and at top and bottom ends. The vortices are seen in figure 2B.

As to claim 3, see the convex curvature at top of the plates.

As to claim 5, the plates are non-rectangular.

As to claim 9, the plates are connectable. The peak vortexes run along the peak width.

As to claim 10, the peak vortexes are along the upper plate.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 4, 8, 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bilanin in view of Ringhoffer.

Ringhoffer used wedge or triangular shaped boattail plates as seen in the figure and disclosed in 1946. It would have been obvious to one of ordinary skill to provide in Bilanin wedge or triangular shaped plates as taught by Ringhoffer in order to reduce the mass and expense of the plate as well as to reduce damage in accidental impact at the corners. Applicant argues specific location distinctions of the reference, yet the rejection relies merely on the self-evident teaching of wedge edge to an aerodynamic structure.

This reference is deemed to be within the first tier test of *In re Wood*, 202 USPQ 171 (CCPA 1971) and thus analogous to the problem of applicant. Applicant again argues the effect of this shape, yet the claims are overly broad in comparison to the disclosure. Applicant merely recites known features of this art in support of a patent claiming these features.

6. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bilanin in view of Kamm.

It would have been obvious to one of ordinary skill to round the edges of the plates to produce convexly curved plate edges as taught by Kamm in order to reduce weight of the plates as well as reduce accidental impact damage at the corners. Applicant argues specific location distinctions of the reference, yet the rejection relies merely on the self-evident teaching of curved edge to an aerodynamic structure. This reference is deemed to be within the first tier test of *In re Wood*, 202 USPQ 171 (CCPA 1971) and thus analogous to the problem of applicant. Applicant again argues the effect of this shape, yet the claims are overly broad in comparison to the disclosure. Applicant merely recites known features of this art in support of a patent claiming these features.

Response to Arguments

7. Applicant's arguments filed 2/2/2005 have been fully considered but they are not persuasive. Please see the detailed action above.

Conclusion

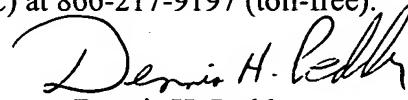
8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dennis H. Pedder whose telephone number is (703) 308-2178. The examiner can normally be reached on 5:30-2:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn D. Dayoan can be reached on (703) 308-3102. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Dennis H. Pedder
Primary Examiner
Art Unit 3612

31/05